

HEADQUARTERS
6511TH TEST GROUP (PARACHUTE) (ARDC)
UNITED STATES AIR FORCE
AUXILIARY LANDING FIELD
EL CENTRO, CALIFORNIA



REPLY TO

ATTN OF: FTLGH

22 September 1960

SUBJECT: Testing of the AP-22S Full-Pressure Suit, FTL-225B

TO: ✓FTL
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FTLG

1. Two live jumps were made from the C-130 at a pressure altitude of 30,000 feet. CWO Laine jumped first as spotter wearing an experimental multi-stage parachute, 24-ft. reserve chest parachute with an altimeter, stop-watch and bailout oxygen bottle mounted on the top and bottom of the reserve pack. Exit from the C-130 was excellent and a good stable prone position was held for ten seconds. I tucked in at ten seconds on the stop-watch and the first stage parachute automatically deployed at approximately 28,000-ft. pressure altitude. Deployment of the first stage parachute was violent and could be compared to a 28-ft. flat canopy opening. I tried to check the first stage canopy but could not see it due to excessive billowing of the main canopy that rides in the trail position. I could see many torn edges of international orange fabric on the trailing main canopy and the main stage risers were out of the pack. I decided to ride the first stage to 14,000 feet and then manually over-ride the system. This action would give me plenty of time to jettison the first and main stage parachute and then go into a clean free-fall for reserve parachute deployment. At 14,000 feet I manually over-rode the system and watched the main parachute deploy. Gores No. 8 and No. 22 were split from skirt hem to vent hem and a large section of Gore No. 21 was blown, plus many small holes and tears. I rode the damaged main parachute down to 3000 feet and decided that my rate of descent was too fast for a safe landing off of the drop zone. I grasped the reserve parachute, pulled the ripcord handle and then threw the reserve straight out. An immediate clean inflation took place; however, the damaged main began to flutter and tried to entangle the reserve. I fought to keep both parachutes from entangling but to no avail. Finally the main collapsed on top of the reserve canopy. I immediately jettisoned the damaged main by operating the canopy release. A hard landing was made on a gravel road, however, no injuries were sustained. [] from Chance-Vought was on the scene immediately and informed control that I was not injured. The H-21 picked me up and returned me to the Drop Zone control area.

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2. On the second pass of the C-130 at 30,000-ft. pressure altitude,

On file USAF release
instructions apply.

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[] jumped, wearing the AP-22S full pressure suit, a back mounted oxygen organ. The experimental multi-stage parachute and a 24-ft. chest parachute with a stop-watch and altimeter mounted on the top of the pack. A rescue mirror was taped to [] right forearm to allow him to check his first stage parachute. [] remained relatively stable after exit and his first stage parachute automatically deployed after 12 seconds of free-fall. He rode the first stage parachute down to 6400 feet where the main parachute automatically deployed. A suspension line or lines were routed over the top of his main canopy. The lines twisted up the canopy at the skirt hem probably due to canopy rotation caused by the blown No. 8 Gove. [] deployed his reserve parachute and had a clean deployment. His main canopy collapsed and entangled around him. He gathered all of the loose canopy in and landed hard on the N.W. corner of the drop zone but without injury. [] did not wear the 55-lb. seat kit on this drop as it had been damaged on the previous day's drop.

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3. FTL-225B is now terminated. [] will write the report using data compiled by the 6511th Test Group (Parachute).

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4. All parties concerned were in agreement that the malfunctions of the non-standard parachute did not adversely affect the testing of the AP-22S full pressure suit. [] stated that he was well pleased with the test results.

Charles O. Laine
CHARLES O. LAINE,
CWO, USAF
Project Engineer
Man-Carrying Section